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ABSTRACT

This document is Pennsylvania's master plan for environmental education (EE). It includes: (1) a list of planning principles and guidelines to enhance implementation of the master plan; (2) a flow chart illustrating feasibility, planning, action, and impact phases for the years 1983-85; (3) a summary of major recommendations; (4) a chart illustrating a statewide EE communication network; and (5) lists of recommendations together with comprehensive implementation strategies. Recommendations are provided for: Pennsylvania's Office of Environmental Education (OEE); OEE staffing; OEE budget; OEE advisory council; the state board of education; intermediate units; school systems; higher education; resource management agencies; community and environmental organizations; youth organizations; religious organizations; the corporate community; EE facilities; EE organizations; the Pennsylvania house and senate; and the media. Included in appendices is the 1984 agreement between the Pennsylvania Department of Education and the Pennsylvania Department of Environmental Resources to establish and implement an EE program for Pennsylvania, EE budget for fiscal year 1984-85, and a definition of EE. This definition states that EE is a learning process concerned with the interrelationships among components of the natural and human-made world producing growth in the individual and leading to responsible stewardship of the earth. (JN)

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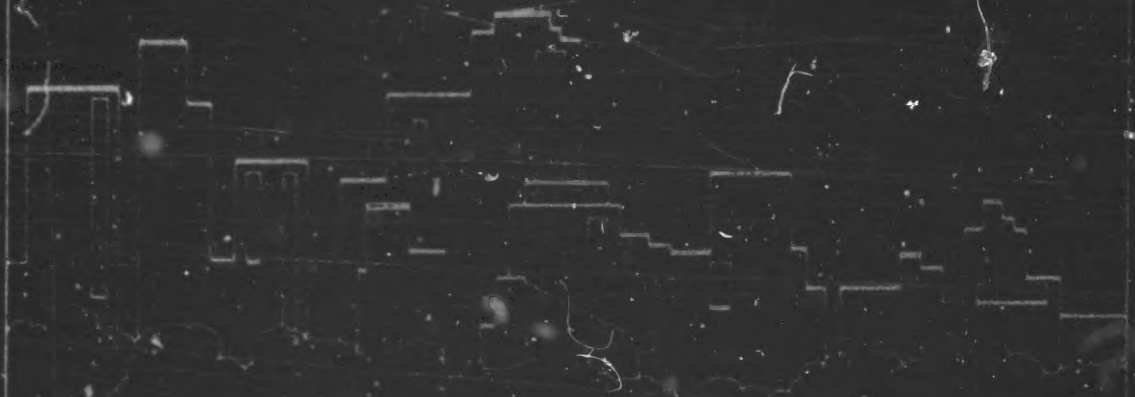
Pennsylvania Environmental Education MASTER PLAN



New Direction Across The State

For The Total Community

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SE 045 446

Task Force: Pennsylvania Environmental Education Master Plan
Letter of Transmittal

December 10, 1984

Mr. Nicholas DeBenedictis
Secretary of Environmental Resources

Dr. Margaret Smith
Secretary of Education

Dear Mr. DeBenedictis and Dr. Smith:

The Pennsylvania Environmental Education Master Plan Task Force is pleased to transmit to you this environmental education document. You are to be congratulated for establishing the Task Force and funding the 18-month effort. Your commitment and support for the redirection of environmental education in Pennsylvania will benefit present and future generations.

The recommendations and information in the document provide an outline for both immediate and long-term action. Foremost in the Master Plan is the creation of an Office of Environmental Education. This Master Plan's potential can be fully realized only through a statewide network with an environmental education office as its nucleus.

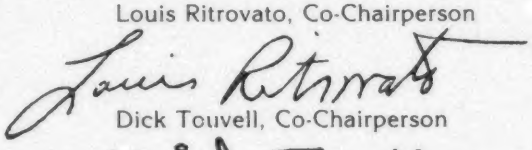
Furthermore, the network will be effective only if the General Assembly enacts legislation which mandates and supports environmental education as a "cradle-to-grave" learning process for citizens of the Commonwealth.

To provide a holistic approach to the redirection of environmental education in Pennsylvania, recommendations and strategies have been directed to the total community.

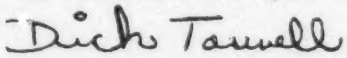
Members of the Task Force enthusiastically look forward to your continued commitment and to your support for the rapid implementation of these recommendations.

Sincerely,

Louis Ritrovato, Co-Chairperson



Dick Tauvell, Co-Chairperson



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Task Force Members

Task Force members were appointed by Secretary DeBenedictis and Secretary Wilburn to represent the broad spectrum of Pennsylvania citizenry. The Task Force is comprised of individuals from basic education, higher education, resource management agencies, corporate communities, media, intermediate units, youth organizations, religious groups and other community and environmental organizations.

To ensure balanced representation, individuals were selected on the basis of geographic distribution, demonstrated leadership, involvement in community concerns and a diversity of professions and vocations.

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* Elisa Caravaglia
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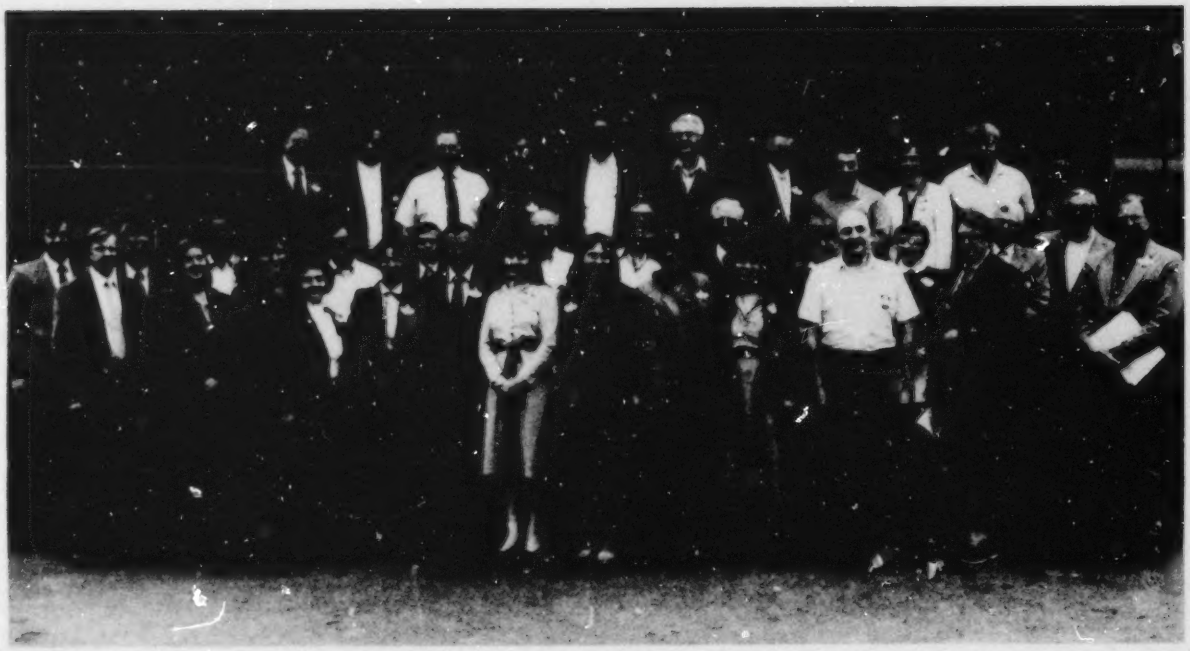


Front row (l to r) Daniel Devlin, Megan Milford, Sue Daugherty, Ruth Becker, Donnan Stoicovy, Dr. Ruben Flores, Nadine McHenry, Anna McCartney, Erma Thompson, Carol Edwards, Joe Banks, Don Owen, Dick Daley

Middle row (l to r) Carl Graybill, Steve Ulsh, Eva Tucker, Richard Kubiak, Isadore Lenglet, Albert Jacobs William Shaffer, George Miller, Dr. Jerold Elliott, Elisa Caravaglia, Robert Klingman, Stephen Rituper

Back row (l to r) Larry Schweiger, Frederick Bubb, Dr. Paul Hess, Dr. Frederick Howard, Vernon Jones, George Aiken, Dr. Craig Chase, Louis Ritrovato, Sister Pat Lupo, Dick Touvell

Not present when photo was taken: William Einsig, Frank Felbaum, Kathy Golia, Dr. Richard James, John McDermott, Dr. Kerry Moyer, John Padalino, Joseph Smith, Betty Jane Steiner

Acknowledgements

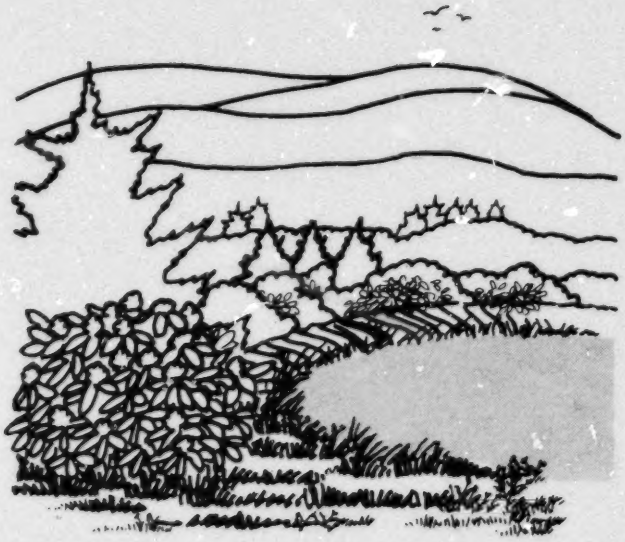
This Environmental Education Master Plan is the compilation of many people's ideas and efforts. Isadore Lenglet, Department of Environmental Resources' Deputy Secretary for Administration, is to be applauded for providing the administrative support and leadership which effectively mobilized the task force. Executive Secretary Sherrie Shultz, Administrative Assistant Rose Marie Beiswenger, and Clerk Typist Brenda Bartholomew provided invaluable assistance as they coordinated contractual agreements, handled hotel and travel arrangements and served as the communication nucleus between the task force and the community. Their contributions are much appreciated.

Our gratitude is also extended to members of the task force. Their efforts to gather ideas, information and materials have been responsible for establishing a strong foundation for the master plan. A special thanks is extended to the writing team (Elisa Caravaglia, Carol Edwards, Jerold Elliott, Dick James, Richard Kubiak, John Padalino and Larry Schweiger) for synthesizing the voluminous amount of information into a comprehensive document. Their added time and commitment reflects the renewed spirit of the environmental education community as everyone anticipates the implementation of the plan.

We acknowledge the insight of the Pennsylvania Bureau of State Parks, Clarion University of Pennsylvania and the McKeever Environmental Learning Center for recognizing the importance of the master plan and allowing us to participate in its development.

Without the meticulousness and caring assistance of Clerk Stenographer Dolores Nygard, the document's six major drafts would not have materialized into such coherent additions. Her willingness to do whatever was needed was inspirational.

Patti Estheimer contributed to the plan's message by providing the graphics and formatting ideas. Her talents have helped to create a more readable document. Nancy Christie, Maryanne Peightel and Burt Ellsworth contributed grammatical, typing and photographic skills, respectively, which enhanced the quality of the final document.



We are very grateful to all professional colleagues who gave their criticism and support in the development of the plan, especially those who presented oral and written testimony at the public hearing.

A special thanks to Dr. William Stapp (University of Michigan) and Dr. Woodward Bousquet (Warren Wilson College) for their content and language editing. Their encouragement and support are especially appreciated.

We would be remiss to not acknowledge the patience and support given by Emilie Ritrovato and Jeanne Touvell.

Because of the enthusiasm, dedication and commitment of all the people involved, we feel a strong sense of pride and excitement to have been a part of the master plan's design. More importantly, however, we look forward to the implementation of the plan which will help ensure a quality environment for present and future generations.

Perspective

With the publication of Rachel Carson's *Silent Spring* in 1962, public environmental consciousness was first aroused. However, it wasn't until 1970 that a tidal wave of public concern broke, not only in this country but globally. That year initiated what many term the beginning of the "environmental revolution." It was ushered in by a remarkable piece of legislation, the National Environmental Policy Act which mandated Environmental Impact Statements, followed by 20 major environmental laws enacted during the decade. These laws addressed the public's concern for maintaining the quality of life.

E.Q. Index

As a result of heightened public awareness, numerous organizations were prompted to issue report cards on the status of America's resources. One such organization, the National Wildlife Federation, has published an annual *Environmental Quality (E.Q.) Index* for the past 15 years. The *E.Q. Index* considers seven major resources: wildlife, air, water, soil, minerals, forests and living space.

Air is measurably cleaner in most American cities, and fish have returned to many lakes and rivers that a few years ago were devoid of life. These are two of many positive advances recently cited by the index. However, many serious problems remain such as acid rain, soil erosion, toxic waste seepage and nonpoint source water pollution.

Not only is the current condition of the environment being tracked, but many organizations and groups are also projecting what the future will hold.

Global 2000

In 1980, the U.S. Council on Environmental Quality issued *The Global 2000 Report to the President*. The report states that if little or no progress is made in creating a more ecology-minded civilization on our planet, then a more crowded, more polluted and less stable world will result. The Council based this conclusion about the year 2000 on some assumptions, namely that food supply, energy consumption and other trends, will continue without being altered drastically by technological or political developments.

These gloomy predictions are balanced by a more positive view shared by the Cousteau Society, Julian Simon, and the late Herman Kahn; society has a good chance of making the necessary lifestyle corrections and technological advances which will result in a more liveable world in the year 2000.

Pennsylvania Bill of Rights

The continued increase in public environmental awareness and concern prompted strong governmental involvement. In 1970, the Pennsylvania Legislature enacted the Pennsylvania Bill of Rights, guaranteeing a quality environment to each citizen of Pennsylvania.

The Bill of Rights, an integral part of Pennsylvania's constitution, states:

> The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all people.

Environmental Education in Pennsylvania

The Bill of Rights was followed by the formation of the Environmental Education Advisory Council, commissioned in 1974 by the secretaries of the Pennsylvania Departments of Education and Environmental Resources, John Pittenger and Dr. Maurice K. Goddard, respectively. The Advisory Council was assigned the important task of directing the state's environmental education programs.

In 1978, based on the Advisory Council's recommendation, the State Board of Education adopted environmental education as one of the desirable outcomes for graduating students. In addition, one of the 12 goals of quality education adopted by the Board concerns the environment. It reads:

> **Environment.** Quality education shall help every student acquire the knowledge and attitudes necessary to maintain the quality of life in a balanced environment. Objectives are:
>
> (i) Knowledge of natural and human resources.
> (ii) Geographic understanding: local, regional, global.
> (iii) Interrelationships and interdependence of natural and human systems.
> (iv) Development of personal environmental attitudes and values.
> (v) Environmental problem solving and management skills.
> (vi) Knowledge and appropriate uses of energy.

At the same time progress was being made in Pennsylvania, strides were also being made nationally and internationally. In 1970 and 1972, national conferences on environmental education were held in Green Bay, Wisconsin. Other national conferences took place in Ann Arbor, Michigan, and Snowmass, Colorado, in 1974. A major landmark occurred in Belgrade, Yugoslavia, in 1975, when 64 countries drafted the Belgrade Charter. This document set forth the need for a global framework for environmental education goals, objectives and program principles. In response to the Belgrade conference, a North American seminar convened in 1976, in St. Louis, Missouri.

The first intergovernmental conference on environmental education, sponsored by the United Nations and held in Tbilisi, USSR, followed in 1977. The resulting global action plan, the Tbilisi Declaration, was translated into a North American program in 1978, at a Washington, D.C. meeting.

However, environmental education efforts, particularly those on the state level, became fragmented after 1978. There have been no follow-ups to other recommendations made by the 1974 Environmental Education Advisory Council; environmental education positions on the state level have been eliminated; and communication and cooperation among interested parties has declined.

Master Plan Task Force

In 1983, the First National Congress on Environmental Education Futures, convened in Burlington, Vermont, caused a renewed initiative. Based on this nationwide thrust, Pennsylvania established the Environmental Education Master Plan Task Force in 1984. Nicholas DeBenedictis, secretary of the Department of Environmental Resources and Dr. Robert Wilburn, secretary of the Department of Education, charged the task force with assessing the status of environmental education in the Commonwealth, drafting recommendations for the redirection and implementation of a statewide environmental education effort, and establishing a communication network to promote environmental education through an information and program exchange.

The keystone tenet for the Pennsylvania Environmental Education Master Plan has its basis in Dr. William Stapp's statement that:

> The foundation for strong environmental action rests, to a large degree, on what happens in our homes, schools, youth programs, church, community, media and interest groups. Each of these has a particular role to play in the education of the individual. Today's youth will soon be the citizens and voters whose decisions will affect not only the immediate environment in which they live, but also that of their nation and other parts of the world. They will make the choices and directly or indirectly by their behavior cast the votes about recreation, transportation, beautification, water needs, and control of air and water pollution.[1]

This statement, along with the Pennsylvania Bill of Rights and the education quality goal statement, will serve as the basis for the Commonwealth's environmental education program. This program will not be directed towards schools alone. The entire community will be involved—every person through social, political, cultural, educational, economic and religious affiliations must help implement this master plan to sustain a quality lifestyle for future generations.

[1] *Stapp, William B. and Dorothy A. Cox (1979). Environmental Education Activities Manual. Thomson-Shore, Inc., Rexter, Michigan, USA, 48130*

Planning Principles and Guidelines

The success of the master plan's implementation will be enhanced greatly through sound planning principles and guidelines. Direction has been established for Pennsylvania by adopting the global environmental education framework generated by the international conferences in Belgrade (1975) and Tbilisi (1977). The following planning elements are, therefore, integral components of the master plan.

Goal Statement

Environmental Education's goal is:

To develop a citizenry that is **aware** of, and **concerned** about, the total environment, and its associated problems, and which has the **knowledge, attitude, motivations, commitment,** and **skills** to work individually and collectively toward solutions of current problems and the prevention of new ones.

Guiding Principles

Environmental Education should:

a. Consider the environment in its **totality**—natural and built, technological and social, economic, political, moral, cultural and historical, and aesthetic aspects;

b. Be a continuous **life-long process**— it should begin at the preschool level and continue through all formal and nonformal stages;

c. Be **interdisciplinary** in its approach, drawing on the specific content of each discipline in making possible a holistic and balanced perspective;

d. Emphasize **active participation** in preventing environmental problems and working toward their solution;

e. Examine major environmental issues from **local, national, regional** and **international** points of view, so that learners receive insights into environmental conditions in other geographical areas and into the interrelatedness of all concerns;

f. Focus on **current** and **potential** environmental situations;

g. Emphasize the **complexity** of environmental problems and thus the need to develop critical thinking and problem-solving skills;

h. Utilize **diverse learning environments** and a broad array of education approaches to teaching and learning about and from the environment with due stress on practical activities and first-hand experiences;

i. Focus on the learner's **own community** and relating topics being discussed to state, regional, national and international issues and perspectives;

j. Relate **environmental sensitivity, knowledge, problem-solving,** and **values** at every level, but with special emphasis on environmental sensitivity to the learner's own community in early years;

k. Enable **learners to play a role** in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences.

Utilizing this goal and guiding principles[1] the task force has adopted the following environmental education definition:

> Environmental education is a learning process concerned with the interrelationship within and between the various components of the natural and human-made world producing growth in the individual and leading to responsible stewardship of the earth.[2]

In order for the goal statement, guiding principles and environmental education definition to be translated into tangible programs and activities, the following planning objectives were established by the task force:

* Assess the current status of environmental education in Pennsylvania and the nation in relation to current and projected national trends in environmental education.

* Establish a statewide network to effectively promote environmental education information and curricula, and to implement a training, research, evaluation and communication system.

* Prepare recommendations for the redirection and subsequent implementation of an environmental education network for the Commonwealth of Pennsylvania consistent with a national network for environmental education.

* Create a document endorsed by representatives of a broad spectrum of Pennsylvania citizenry, e.g., conservation organizations, business, industry, state and local government, and the education community.

* Design a monitoring system to ensure the implementation of the task force recommendations for the Pennsylvania Environmental Education Network Master Plan.

* Establish a realistic time frame that will allow for the completion of the final document within 12 months of the task force's charge.

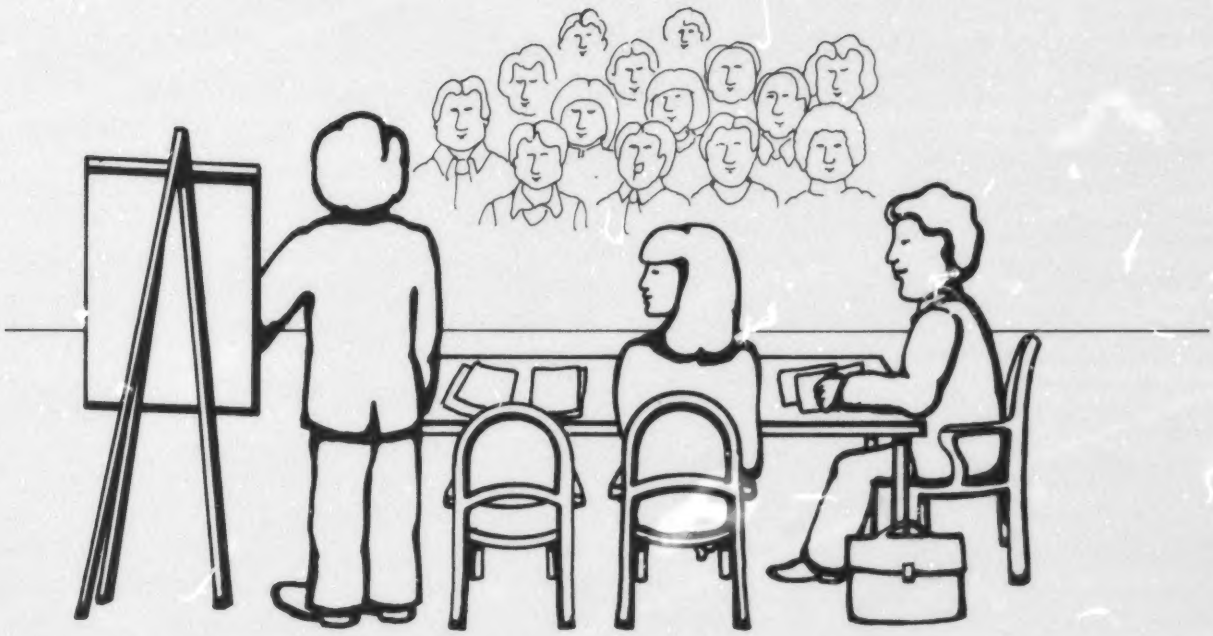
Again realizing that the task of redirecting environmental education in Pennsylvania would be monumental, it was vital to develop a sound and comprehensive plan. Contained within this plan are recommendations directed to all members of the community. These recommendations are the framework for installing a holistic environmental education network across the Commonwealth of Pennsylvania.

[1] *International Intergovernmental Conference on Environmental Education: Tbilisi, USSR: October 14-26, 1977.*

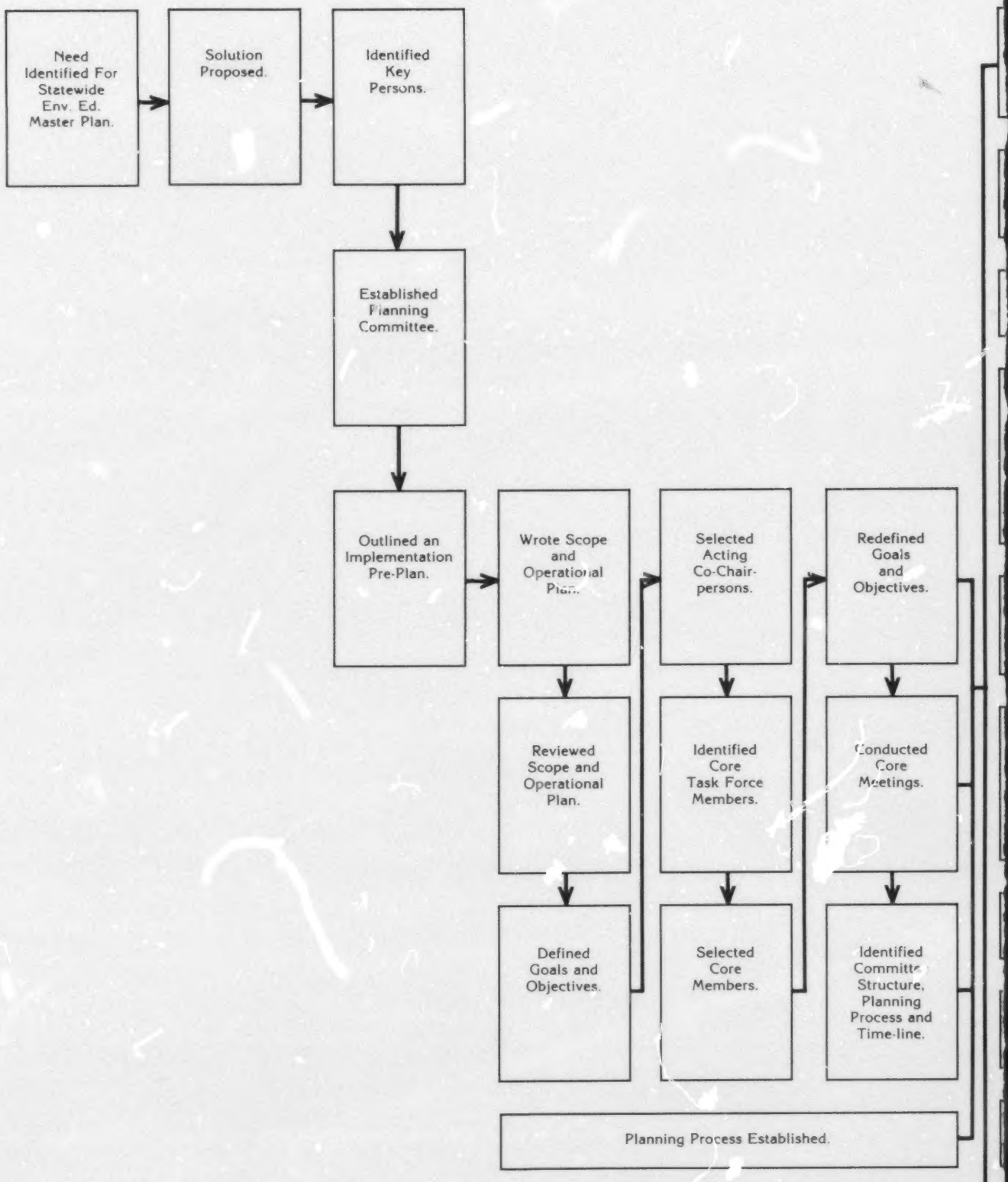
[2] *Definition taken from the 1974 Environmental Education Advisory Council Report presented to Secretaries John Pittenger and Dr. Maurice Goddard.*

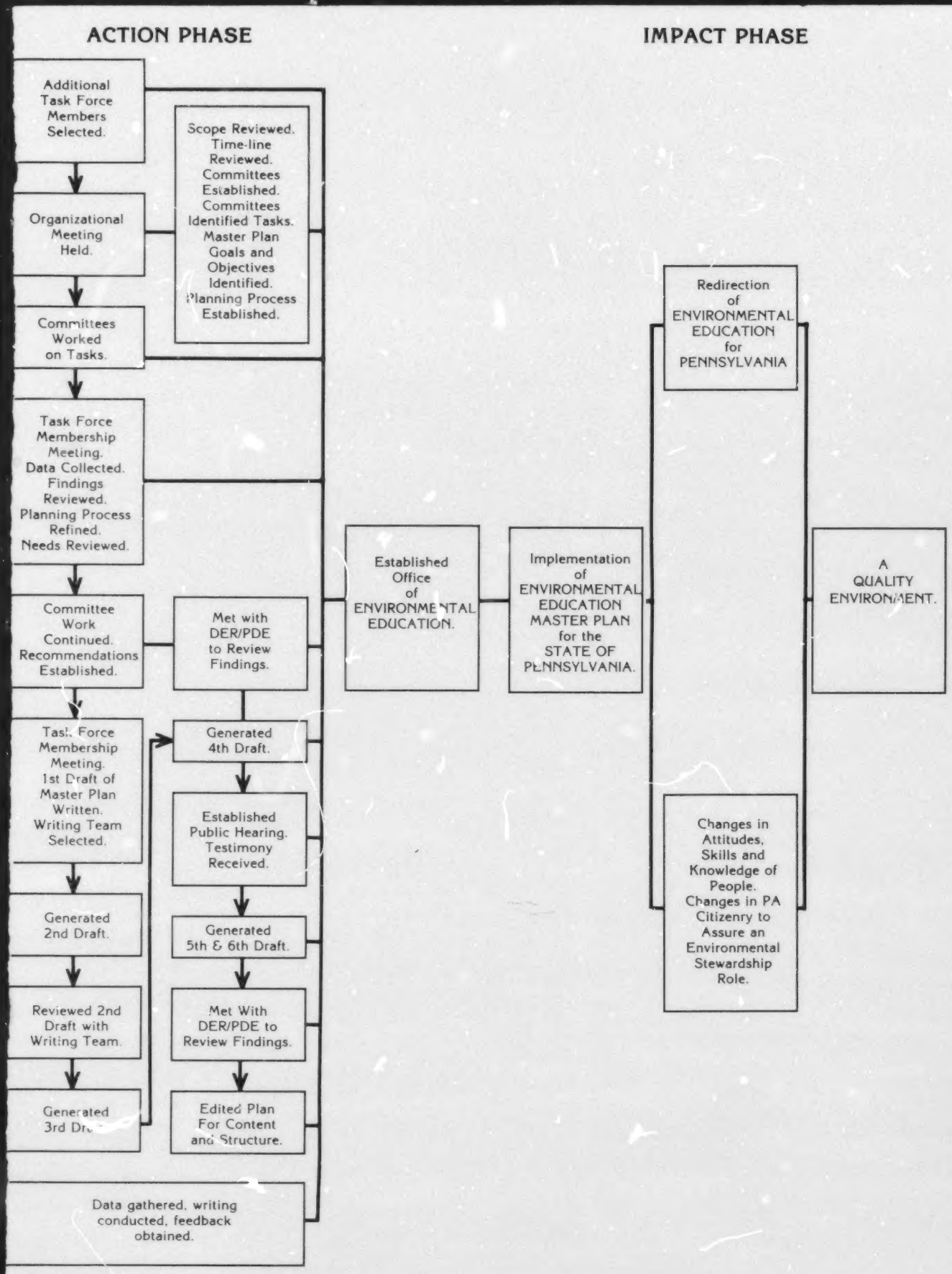
Planning Process

The development of the Pennsylvania Environmental Education Master Plan covered an 18-month period: July 19, 1984 to December 10, 1984. A six-month feasibility and planning phase initiated the process. Following this initiative, a 42-member task force carried out the action plan including data collection, solicitation of public input, and writing the final document. All this culminated in the establishment of the Office of Environmental Education and a Master Plan for Pennsylvania. This process is documented graphically on the following page.



Planning Process


FEASIBILITY PHASE
PLANNING PHASE
Need Identified For Statewide Env. Ed. Master Plan.
Solution Proposed.
Identified Key Persons.
Established Planning Committee.
Outlined an Implementation Pre-Plan.
Wrote Scope and Operational Plan.
Selected Acting Co-Chair-persons.
Redefined Goals and Objectives.
Reviewed Scope and Operational Plan.
Identified Core Task Force Members.
Conducted Core Meetings.
Defined Goals and Objectives.
Selected Core Members.
Identified Committee Structure, Planning Process and Time-line.
Planning Process Established.
July 1983
Sept. 1983
Oct. 1983
Nov. 1983
Dec. 1983


ACTION PHASE
IMPACT PHASE
Additional Task Force Members Selected.
Organizational Meeting Held.
Committees Worked on Tasks.
Task Force Membership Meeting. Data Collected. Findings Reviewed. Planning Process Refined. Needs Reviewed.
Committee Work Continued. Recommendations Established.
Task Force Membership Meeting. 1st Draft of Master Plan Written. Writing Team Selected.
Generated 2nd Draft.
Reviewed 2nd Draft with Writing Team.
Generated 3rd Dr...
Scope Reviewed. Time-line Reviewed. Committees Established. Committees Identified Tasks. Master Plan Goals and Objectives Identified. Planning Process Established.
Met with DER/PDE to Review Findings.
Generated 4th Draft.
Established Public Hearing. Testimony Received.
Generated 5th & 6th Draft.
Met With DER/PDE to Review Findings.
Edited Plan For Content and Structure.
Data gathered, writing conducted, feedback obtained.
Established Office of ENVIRONMENTAL EDUCATION.
Implementation of ENVIRONMENTAL EDUCATION MASTER PLAN for the STATE OF PENNSYLVANIA.
Redirection of ENVIRONMENTAL EDUCATION for PENNSYLVANIA
Changes in Attitudes, Skills and Knowledge of People. Changes in PA Citizenry to Assure an Environmental Stewardship Role.
A QUALITY ENVIRONMENT.
5
Jan. 1984 — Dec. 1984 — Jan. 1985

Summary Of Recommendations

The master plan is directed toward all Pennsylvania citizens. Seventeen major recommendations establish a foundation for the statewide network. Major recommendations are outlined below; comprehensive implementation strategies are included in the body of this document.

Office of Environmental Education:
The Governor should establish an Office of Environmental Education by Executive Order; this office should then be made permanent by legislation. The office should be housed in the Department of Education, at a bureau level. This office must maintain a direct liaison with the Secretary of the Department of Environmental Resources.

Staffing: The Department of Education should employ one director, two environmental education specialists and one administrative assistant to perform the duties and functions of the Office of Environmental Education in accordance with the Commonwealth's standards and procedures.

Budget: Monies should be made available to operate the Office of Environmental Education and its accompanying network during its first and second years of operation. The rate of growth of the network will determine the funding levels for subsequent years.

Advisory Council: The secretaries of the Department of Environmental Resources and the Department of Education and the Chancellor of the State System of Higher Education should establish an Advisory Council to the Office of Environmental Education.

State Board of Education: The secretary of the Department of Education and the Pennsylvania State Board of Education should strengthen environmental education in the classroom by mandating curriculum regulations within Chapter V of the Pennsylvania School Code.

Intermediate Units: The secretaries of the Department of Education and the Department of Environmental Resources should ensure that the intermediate units become the vehicle to coordinate the delivery of curricula, materials and training to local, public, private and parochial school systems.

School Systems: The secretary of the Department of Education should charge public, parochial and private schools throughout Pennsylvania with implementing a comprehensive environmental education program as mandated.

Higher Education: The Office of Environmental Education should seek the cooperation of institutions of higher education to provide leadership in delivering environmental education undergraduate, graduate and continuing education courses.

Resource Management Agencies: The Office of Environmental Education should encourage resource management agencies to participate as an integral part of the network, thereby expanding their leadership role and utilizing their resources to the fullest potential.

Community and Environmental Organizations: The Office of Environmental Education and the secretaries of the Department of Education and the Department of Environmental Resources should encourage community and environmental organizations to participate in and support the environmental education network.

Youth Organizations: The Office of Environmental Education should seek the cooperation and involvement of all youth organizations to promote environmental awareness and action in their local communities.

Religious Organizations: The Office of Environmental Education should seek assistance from religious organizations who wish to promote environmental awareness.

Corporate Community: The Office of Environmental Education should encourage businesses and industries to become an integral part of the environmental education network.

Environmental Education Facilities: The Office of Environmental Education should promote the utilization of environmental education facilities such as museums, zoos, and nature, science and environmental education centers to expand and deliver environmental education to the public.

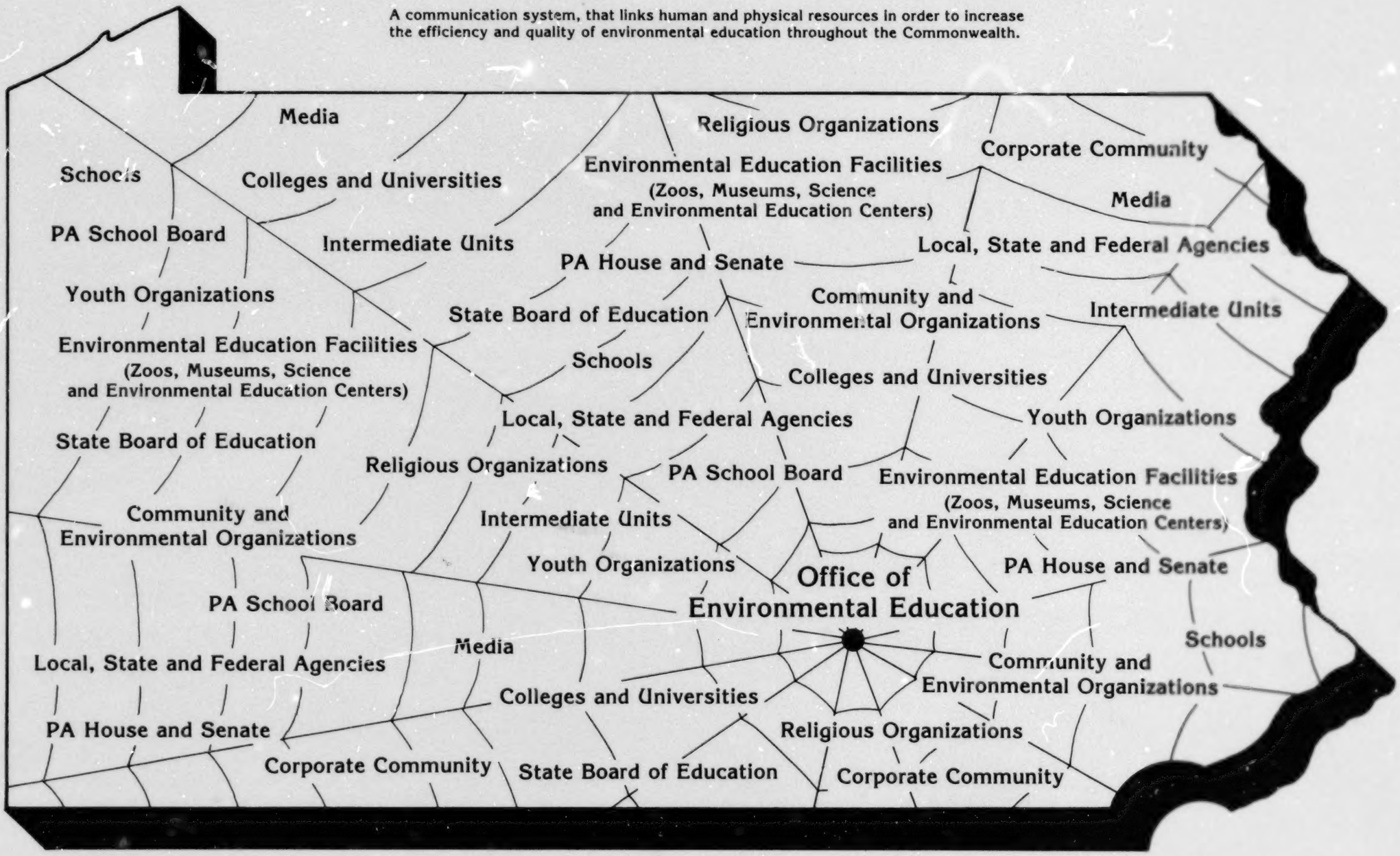
Professional Environmental Education Organizations: The Office of Environmental Education should provide leadership and play an active role to unite environmental education professionals from all the network organizations into a synergistic voice in order to more effectively support the mission of the network.

Pennsylvania House and Senate: The secretaries of the Department of Education and the Department of Environmental Resources should work with the General Assembly to assure the success of the Office of Environmental Education and accompanying network.

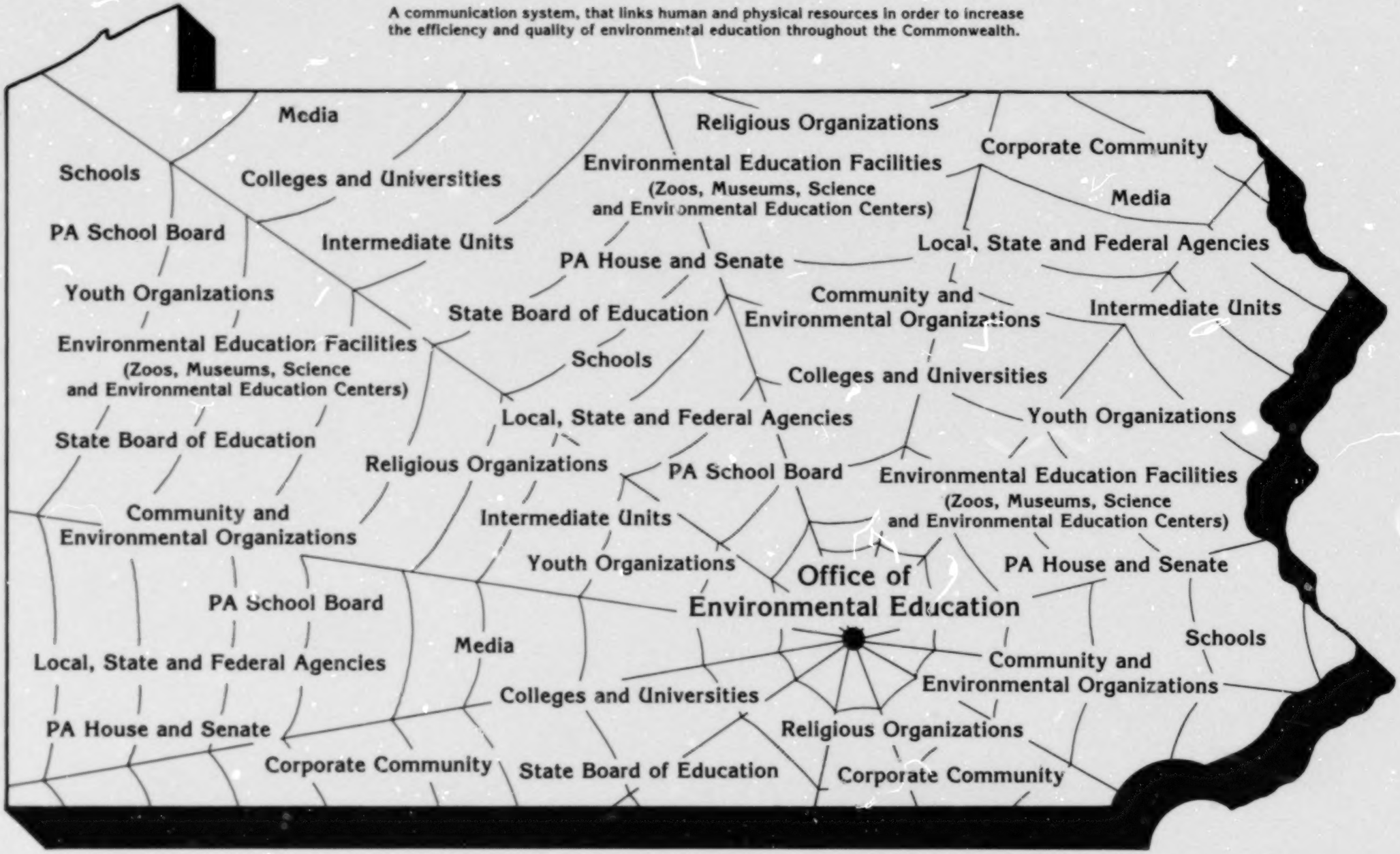
Media: The Office of Environmental Education should design and establish a system for distributing and exchanging environmental programs and information utilizing the mass media.

Statewide Network

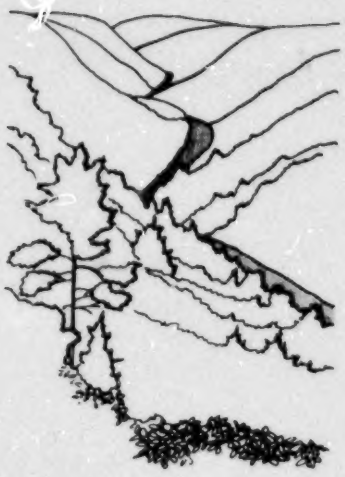
A communication system, that links human and physical resources in order to increase the efficiency and quality of environmental education throughout the Commonwealth.

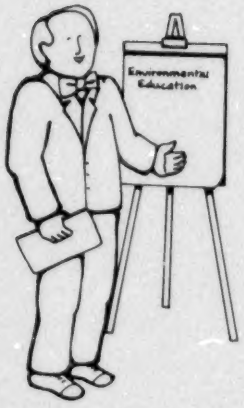


A communication system, that links human and physical resources in order to increase the efficiency and quality of environmental education throughout the Commonwealth.



Recommendations





COMMUNICATION
COORDINATION
LEADERSHIP

Office of Environmental Education

RECOMMENDATION: The Governor should establish an Office of Environmental Education by Executive Order; this office should be made permanent by legislation. The office should be housed in the Department of Education, at a bureau level. This office must maintain a direct liaison with the Secretary of the Department of Environmental Resources.

The functions of the office shall be to:

- Create a comprehensive management and operational plan to optimize the successful development of the Office of Environmental Education and the statewide network.
- Implement and maintain the statewide network for environmental education and function as its nucleus.
- Assist with the implementation of the recommendations directed to each unit of the network, e.g., resource agencies, corporate community, and community organizations.
- Monitor and evaluate the implementation of recommendations directed to various units of the network.
- Establish a system for securing and dispersing funds to develop and expand the environmental education network.
- Seek private funding to augment the annual state appropriation and expand the environmental education network effort.
- Assist with the integration and evaluation of environmental education in existing school curricula. Develop a scope and sequence plan and coordinate its implementation within Chapter V of the Pennsylvania School Code regulations.

- Identify model curricula for documentation and implementation throughout the network.

- Identify intermediate units, on a priority basis, in which to place environmental education specialists as funding allows. The specialists will be intermediate unit employees, but funded and coordinated by the Office of Environmental Education.

- Publish a document describing the employment qualifications and training needs for entering the environmental education field.

- Establish a system that will inventory, categorize and disseminate environmental education information, materials, internships and environmental education certification information.

- Review, analyze and promote basic and applied research on environmental issues, environmental education developments and trends, methodology and instructional strategies, and the effectiveness of existing programs. Disseminate pertinent information to the units of the network.

- Prepare an annual report documenting accomplishments, identifying needs and establishing objectives for the coming year.

- Identify a member of the professional staff within each Pennsylvania school district to coordinate environmental education activities for the district, and select an environmental education leader within each school.

- Establish a grant and contract program in the Office of Environmental Education.

- Promote the use of multimedia, publications, personal communications and the latest communication technology. Create a delivery system which assures the use and exchange of information.

- Inventory and update physical and human resources for environmental education throughout the state.

- Organize the functions of each unit within the network using such categories as programs, research and development, monitoring and evaluation, training, materials and curricula development, communication, in-school and community outreach, residential and nonresidential facilities, and liaison with other groups.

- Create and coordinate a system to provide a variety of in-service and continuing education workshops. Identify and equip facilitators.

- Recommend that the Department of Education require at least three of the twenty-four credit hours needed for permanent teacher certification to be in environmental education.

Office of Environmental Education
Staffing

RECOMMENDATION: The Department of Education should initially employ one director, two environmental education specialists and one administrative assistant to perform the duties and functions of the Office of Environmental Education, in accordance with the Commonwealth's standards and procedures.

The responsibilities of the positions are as follows:

- **Bureau Director:** Manage and administer the Office of Environmental Education, including its budget, staff and the statewide network. Serve as the liaison between the Advisory Council and other network units. Coordinate, monitor and evaluate the implementation of the master plan recommendations.

- **Environmental Education Specialist:** Coordinate the development and implementation of the statewide network including in-school and community outreach programs, training, materials and curriculum development, research, monitoring and evaluation, communication and liaison with other groups.

- **Administrative Assistant:** Serve as an administrative assistant to the bureau director, providing support to ensure the efficient operation of the Office of Environmental Education.

Office of Environmental Education Budget

RECOMMENDATION: Monies should be made available to operate the Office of Environmental Education and its accompanying network during its first and second years of operation. The rate of growth of the network will determine the funding levels for subsequent years.

The monies are to be allocated as follow:

First year:
- $80,000 to hire a director, one environmental education specialist and one administrative assistant.
- $20,000 for operational expenses.

Second Year:
- $300,000 for general operation: staff, Advisory Council and network units.
- $100,000 awarded through grants and contracts.
- $100,000 to hire three environmental education specialists in selected intermediate units to provide services to schools and all other local and state organizations and agencies.

Third Year:
- The rate of growth of the network will determine the funding levels for subsequent years.

Office of Environmental Education Advisory Council

RECOMMENDATION: The secretaries of the Department of Environmental Resources and the Department of Education and the Chancellor of the state system of Higher Education should establish an Advisory Council to the Office of Environmental Education.

Guidelines for establishing and operating the Council:

- The secretaries of the Department of Environmental Resources and the Department of Education shall each appoint six (6) members to the 13 member Advisory Council, no more than three (3) of whom are the same political party, thus ensuring that the council is nonpartisan. One (1) member shall be appointed by the state system of Higher Education. Selection of members shall not be biased on basis of race, sex or creed.

- The 13 member council shall be appointed to a five-year term. The initial term for one-third of the Advisory Council members shall be one year; the term of the second third shall be three years; the term of the final third shall be five years. A member may be appointed for more than one term and shall serve until a successor has been appointed. Members shall not be compensated, but shall be reimbursed for actual expenses in accordance with prevailing Commonwealth procedures and policies.

- For the purpose of the organizational meeting, the secretary of the Department of Education or a designee shall serve as acting chairperson. During this meeting the council membership will elect a chairperson and vice chairperson to serve terms of one year.

- The director of the Office of Environmental Education shall serve as an ex-officio member and as secretary.

- In conjunction with the secretaries of the Department of Education and the Department of Environmental Resources, the council will establish bylaws for governing its operation.

The responsibilities of the council are as follows:

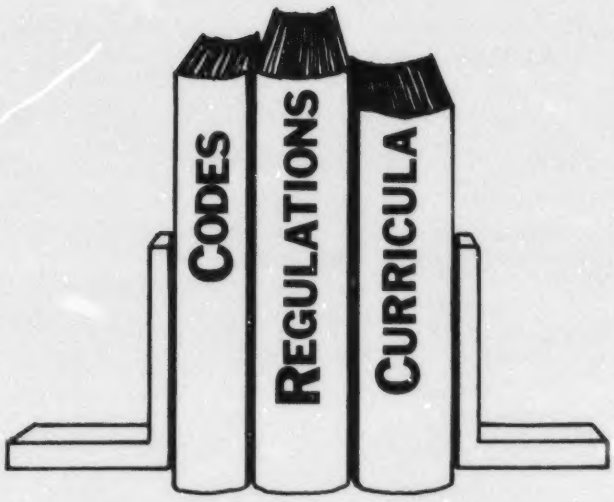
- Develop guidelines and criteria for awarding environmental grants and contracts.
- Develop criteria for determining the priority by which environmental education specialists are assigned to the intermediate units.
- Prepare and present an annual report to the Pennsylvania General Assembly outlining environmental education programs and achievements, highlighting new initiatives and recommending future legislative needs.

State Board of Education

RECOMMENDATION: The secretary of the Department of Education and the Pennsylvania State Board of Education should strengthen environmental education in the classroom by mandating curriculum regulations within Chapter V of the Pennsylvania School Code.

These mandates should include the following:

- A continuum of environmental education learning experiences in every grade level of the K-12 curriculum.
- A required, planned course about the environment for all students at the 11th or 12th grade level. The course should be interdisciplinary by integrating economics, sociology, political science, technology and science as they relate to the environment.
- Encouraging all schools to use textbooks and other educational materials reflecting an environmental perspective.



Intermediate Units

RECOMMENDATION: The secretaries of the Department of Education and the Department of Environmental Resources should ensure that the intermediate units become the vehicle to coordinate the delivery of curricula, materials and training to local, public, private and parochial school systems.

The secretaries should seek the necessary funds to aid the intermediate units in accomplishing the following:

- Employ environmental education specialists to develop a program of environmental education services in cooperation with the Office of Environmental Education.
- Develop and integrate innovative environmental education materials into K-12 curricula.
- Provide assistance to ensure that schools meet Chapter V and other mandated environmental education curriculum requirements.
- Include environmental education in the intermediate unit's periodic needs assessment.
- Conduct workshops focused on environmental education materials, curricula and environmental issues.
- Establish a system in coordination with the Office of Environmental Education to inventory and disseminate environmental education information and materials.
- Assist in the production and distribution of environmental education television, radio and computer programs.
- Assist local school systems in developing proposals to secure funds to support innovative environmental education projects.
- Monitor and evaluate environmental education programs in schools being served.
- Ensure that built environments become an integral part of environmental education curricula.
- Make materials and services available to all units of the network.

School Systems

RECOMMENDATION: The secretary of the Department of Education should charge public, parochial and private schools throughout Pennsylvania with implementing a comprehensive environmental education program as mandated.

The Office of Environmental Education should request that each system:

- Identify a qualified member of the professional staff of each school district to serve as the environmental education coordinator in cooperation with the environmental education specialist within the intermediate unit and the Office of Environmental Education.
- Select an environmental education leader within each school.
- Integrate in every grade level of the K-12 curriculum a continuum of environmental education learning experiences according to the scope and sequence developed by the Office of Environmental Education.
- Teach a required planned course about the environment to all students at the 11th or 12th grade level. The course should be interdisciplinary by integrating economics, sociology, political science, technology and science as they relate to the environment.
- Utilize the Office of Environmental Education's statewide in-service training team for the professional development of faculty, administrative staff, and school boards.
- Develop and maintain a community inventory of physical and human resources and encourage their use.
- Develop and submit funding proposals to stimulate student and faculty involvement in environmental education and environmental studies.
- Identify administrators, faculty and students to participate in statewide seminars, workshops and competitions.
- Establish the school library as a key component of the statewide environmental education clearinghouse for the dissemination of programs, activities and information.

Higher Education

RECOMMENDATION: The Office of Environmental Education should seek the cooperation of institutions of higher education to provide leadership in delivering environmental education undergraduate, graduate and continuing education courses.

The Office of Environmental Education should encourage institutions of higher education to:

- Require as a general degree component in all disciplines, at least three credit hours related to people, their actions and the environment.
- Recommend to the Department of Education suggestions for updating and maintaining the K-12 environmental education certification.
- Develop an environmental education requirement leading to a supervisory certificate.
- Develop and conduct a series of environmental education courses for adults that focus on their community environment.
- Require a minimum of six credits in environmental education for the completion of all teaching degrees, three credit hours related to people, their actions and the environment, and three credit hours in methods of teaching environmental education.
- Develop and conduct in-service workshops in coordination with the Office of Environmental Education.
- Establish a statewide external committee to review college and university environmental education curricula and make recommendations for insuring standardized competency levels to fulfill degree requirements in this area.

Resource Management Agencies

RECOMMENDATION: The Office of Environmental Education should encourage resource management agencies to participate as an integral part of the network, thereby expanding their leadership role and utilizing their resources to the fullest potential.

Such appropriate agencies should be encouraged to:

- Designate one staff member to serve on the Interagency Committee to provide a coordinated program of environmental education support services.
- Employ full-time environmental education specialists to coordinate and facilitate environmental education programs.
- Make environmental education curricula, materials and resources available to the Office of Environmental Education for use in suburban, urban and rural schools and the total community.
- Develop environmental education curricula materials focusing on resource management and the built environment for use with suburban, urban and rural schools and the total community.
- Develop and conduct an outreach program involving students, teachers and the community.
- Establish and/or operate a system of day and residential environmental education programs.
- Include environmental education in employee training programs.
- Designate individuals to help facilitate workshops in cooperation with the Office of Environmental Education's workshop facilitating team.

Community and Environmental Organizations

RECOMMENDATION: The Office of Environmental Education and the secretaries of the Department of Education and the Department of Environmental Resources should encourage community and environmental organizations to participate in and support the environmental education network.

Such organizations may:

- Conduct and/or support workshops, conferences and forums.
- Provide scholarships to young adults planning careers in the environmental field.
- Encourage and develop preschool environmental education programs.
- Produce media programs which utilize the organization's status and credibility in the community to influence public attitude and action.
- Support the development of the proposed national center for environmental education and its accompanying regional network.

Youth Organizations

RECOMMENDATION: The Office of Environmental Education should seek the cooperation and involvement of all youth organizations to promote environmental awareness and action in their local communities.

Appropriate organizations should be encouraged to:

- Establish a committee of leaders of youth organizations to develop and implement strategies maximizing the benefits delivered by youth groups to the community through environmental programs.
- Appoint within each youth organization an environmental education coordinator to be responsible for integrating the latest environmental education methods and programs into existing activities in coordination with the Office of Environmental Education.
- Utilize the Office of Environmental Education's clearinghouse to locate model environmental education materials and programs for use in local community activities.
- Involve youth in action-oriented activities focusing on local community environmental problems, issues and their alternative solutions.
- Participate along with other units of the environmental education network in leadership development workshops sponsored by the Office of Environmental Education.
- Make available their environmental education materials and information to the Office of Environmental Education for distribution to other units in the network.

Religious Organizations

RECOMMENDATION: The Office of Environmental Education should seek assistance from religious organizations who wish to promote environmental learning.

Such organizations should be encouraged to:

- Establish interdenominational committees to develop strategies promoting environmental education programs and activities in cooperation with the Office of Environmental Education.
- Utilize the Office of Environmental Education's clearinghouse to locate model environmental education materials and programs for use in educational programs.
- Share their environmental education materials and information with the Office of Environmental Education.
- Involve the congregation in action-oriented activities focusing on local community service projects dealing with environmental concerns.
- Publish and broadcast radio, television, newspaper and weekly bulletin messages focusing on people, their actions and the environment.
- Designate individuals to help facilitate workshops in cooperation with the Office of Environmental Education's workshop facilitating team.
- Participate in educational conferences, seminars and workshops sponsored throughout the environmental education network.

Corporate Community

RECOMMENDATION: The Office of Environmental Education should encourage the corporate community to become an integral part of the environmental education network.

The Office of Environmental Education should seek the cooperation of the corporate community to:

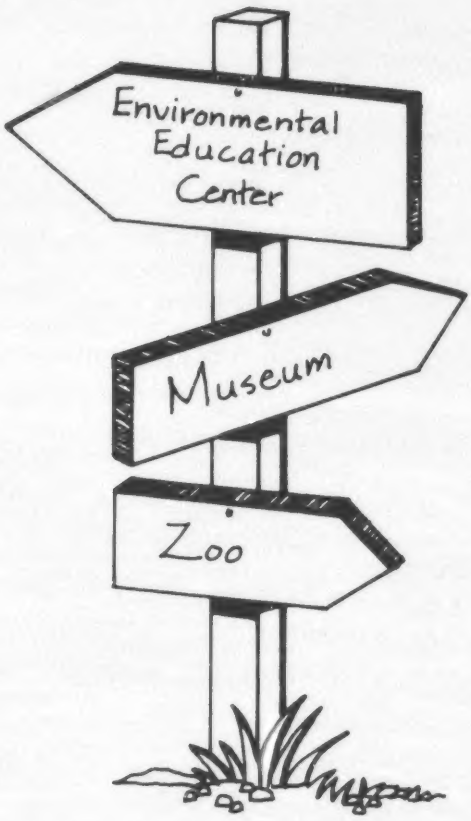
- Fund and design environmental education curricula and materials which deal with people, their actions and the environment.
- Make available their technical information and expertise.
- Employ environmental education specialists to interpret the corporate community and its relationship to the environment.
- Conduct environmental education programs for employees and school students.
- Develop visitor centers to provide educational tours, exhibits and activities.
- Encourage employees to serve on community environmental committees, projects and activities.
- Provide the Office of Environmental Education with funds for research, training, evaluation and program development.
- Make multimedia materials available for use throughout the environmental education network.
- Designate individuals to help facilitate workshops in cooperation with the Office of Environmental Education's workshop facilitating team.

Environmental Education Facilities

RECOMMENDATION: The Office of Environmental Education should promote the utilization of environmental education facilities such as museums, zoos, and nature, science and environmental education centers to expand and deliver environmental education to the public.

The Office of Environmental Education should encourage such organizations to:

- Develop and conduct programs related to people, their actions and the environment.
- Update programs with current environmental education materials and curricula.
- Employ environmental education specialists to develop programs and services in cooperation with the Office of Environmental Education.
- Designate facilitators for workshops as needed.
- Provide resources to produce a coordinated statewide system of environmental education multimedia programs.
- Offer consultant services to other network units to develop their exhibit capabilities.



Environmental Education Organizations

RECOMMENDATION: The Office of Environmental Education should provide leadership and play an active role to unite environmental education professionals from all the network organizations into a synergistic voice in order to more effectively support the mission of the network.

The Office of Environmental Education should encourage such organizations to:

- Publish a professional environmental education journal which focuses on research, environmental education trends, evaluation models and other related subject areas pertinent to Pennsylvania's needs.
- Sponsor conferences, seminars and workshops to assemble individuals from the total community representing diverse interests. The conferences should provide a forum for the exchange of new ideas and accomplishments, and an opportunity to establish new goals.
- Develop and evaluate in cooperation with the Office of Environmental Education special curricula and materials designed for use in urban environments.
- Support, when appropriate, the formation of coalition groups at the community, regional and state level.
- Identify for the Office of Environmental Education exemplary school districts and community organizations and sponsor a statewide recognition and awards program for excellence in environmental education, conservation and protection.
- Designate individuals to help facilitate workshops in cooperation with the Office of Environmental Education's workshop facilitating team.
- Participate in the legislative process relative to environmental education and prepare, when appropriate, reports suggesting areas needing legislative attention.
- Support the development of the proposed national center for environmental education and its accompanying regional network.

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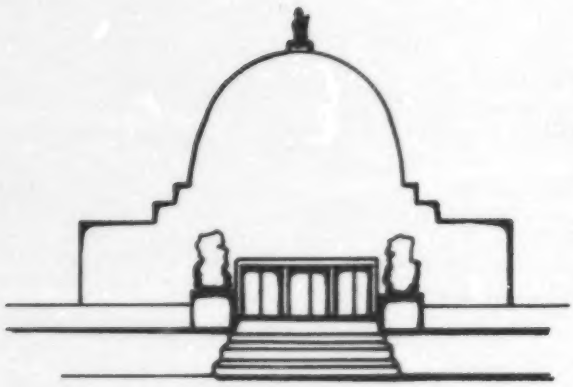
Pennsylvania House and Senate

RECOMMENDATION: The secretaries of the Department of Education and the Department of Environmental Resources should work with the General Assembly to assure the success of the Office of Environmental Education and accompanying network.

The secretaries should:

- Seek sponsorship and work for passage of enabling legislation to secure the Office of Environmental Education and accompanying network.
- Provide sufficient annual appropriation to maintain the Office of Environmental Education and accompanying network.
- Invite members of the legislature to appropriate meetings and conferences.
- Proclaim an annual environmental education week.



Media

RECOMMENDATION: The Office of Environmental Education should design and establish a system for distributing and exchanging environmental programs and information utilizing the mass media.

The Office of Environmental Education should encourage the media to:

- Produce and direct the following television and/or radio programs:
  - * An engaging educational series focused on ecological concepts, environmental issues and alternatives concerning human actions as they relate to the environment for the general public.
  - * An educational series for teachers, youth group leaders, and resource management personnel on current methods and materials and the latest curricula.
  - * An action series focused on youth projects at the local level throughout the Commonwealth.
  - * A "college bowl" type competitive series for high school students which fosters environmental awareness and learning.
  - * A calendar of events and activities associated with the environment.
- Initiate action to ensure that environmental topics are included on "talk shows" across the Commonwealth.
- Use all forms of media to publish and broadcast information dealing with local, national and global environmental information and perspectives.

Appendix

COMMONWEALTH OF PENNSYLVANIA

Appendix A

September 28, 1984

SUBJECT: ENVIRONMENTAL EDUCATION AGREEMENT

TO: All Members
Environmental Education Network Master Plan
Task Force

FROM: Isadore R. Lenglet, Deputy Secretary
Office of Administration
Department of Environmental Resources

I am pleased to transmit the enclosed Environmental Education Agreement between the Departments of Education and Environmental Resources. This Agreement is to establish and implement an Environmental Education Program for the Commonwealth of Pennsylvania. It also requires the establishment and maintenance of an environmental education section within the Department of Education's Bureau of Curriculum and Instruction, Division of Arts and Sciences.

This is a significant historical event between these two agencies, and its success is due to the hard work, effort, and time of each and every task force member. Thank you for your cooperation and dedication to this important concern.

sls

Enclosure

AN AGREEMENT BETWEEN
THE PENNSYLVANIA DEPARTMENT OF EDUCATION
and
THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

This Agreement is made this 10th day of August 1984 between the Department of Education, hereinafter referred to as PDE, and the Department of Environmental Resources, hereinafter referred to as DER. The purpose of this Agreement is to establish and implement an Environmental Education Program for the Commonwealth of Pennsylvania. Environmental education is defined as a lifelong learning process which fosters an environmentally literate citizenry through programs provided by traditional educational institutions (schools) and nonschool organizations. Traditional educational institutions are primary and secondary schools, intermediate units, colleges, and universities. Nonschool organizations include environmental and civic organizations, community agencies, businesses, service clubs, and local, state, and Federal government agencies.

The goals of the Environmental Education Program shall be:

(1) To increase people's awareness of their relationship to the environment and deepen their understanding that we are part of a delicately balanced system;

(2) To build awareness that the earth's finite resources are being depleted by growing consumer demands and increasing world populations;

(3) To encourage individuals to examine and understand the environmental consequences of their attitudes, values, and behavior and make modifications; and

(4) To instill a sense of responsibility to improve the quality of life for the living world and future generations.

WHEREAS, the Declaration of Rights, Article I of the Pennsylvania Constitution states in Section 27 that: "The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

WHEREAS, the Pennsylania State Board of Education by regulations adopted in 1978, 22 Pa. Code §§5.22, 5.75, requires that environmental education shall be part of the instructional program in every school and that conservation and outdoor education be included among the planned courses in every senior high school,

WHEREAS, funds are available from DER for the purposes of environmental education, and this Agreement is contingent upon such funding, and

WHEREAS, PDE has the expertise and the personnel capab'e of both carrying out the activities specified under the terms of this Agreement and carrying out related in-place programs, and PDE has committed the resources of such personnel for the accomplishment of the terms of the Agreeement.

WHEREFORE, in consideration of the mutual promises set forth below, it is agreed as follows:

1. Subject to its other provisions, the terms of this Agreement shall commence on the 10th day of August 1984 and terminate on the 30th day of June 1985.

2. The payment by DER to PDE to be made under this Agreement shall be as specified in Appendix A hereto, but shall in no case exceed $75,000. PDE shall provide for purposes of this Agreement, matching funds amounting to at least 33 percent of the DER funding. Attached hereto and incorporated into this Agreement as Appendix A is the budget indicating DER and PDE contributions to this Agreement.

3. PDE, with regard to the expenditures incurred under this Agreement, shall submit quarterly invoices to DER for actual expenditures in accordance with the attached budget. An original and six copies of each invoice shall be submitted by PDE on the 15th day of each month following the end of each calendar quarter for that quarter's expenditures to the Office of Administration, Department of Environmental Resources, 3rd floor, Fulton Bank Building, Harrisburg, Pennsylvania 17120.

4. PDE shall during the term of the Agreement establish and conduct an Environmental Education Program, implement such program, and agrees to perform each of the tasks listed under the seven program elements which are specified as subparagraphs A through G below. Such performance shall be in accordance with the limitations and conditions stated in such paragraphs. PDE shall:

A. Administration/Operations

(1) Establish and maintain an environmental education section within the PDE Bureau of Curriculum and Instruction, Division of Arts and Sciences.

(2) Hire a program director (Director) for the Environmental Education Program on or before October 1,1984. DER will participate in the PDE recruitment and selection process for such Director. The Secretary of DER shall approve in writing any individual selected by PDE before an offer of employment is extended by PDE to such individual.

(3) Hire, with the approval of the Director, a Clerk/Stenographer on or before October 31, 1984.

(4) Hire, with the approval of the Director, a Curriculum Field Representative on or before January 1, 1985.

(5) Provide office space at 333 Market Street, Education Building for the conduct and administration of the Environmental Education Program.

(6) Provide office equipment and supplies necessary for conducting an efficient Environmental Education Program. Office equipment shall include, but not be limited to: a personal computer with a modem connection, a memory typewriter, and three work stations with a desk and telephone for each. In addition, PDE agrees that the Environmental Education Program will have access to PDE copying, duplicating, and central word processing equipment and the PDE main frame computer.

B. Data Base

(1) Develop a computer based contact file containing data on schools, organizations, and individuals with concern for environmental education.

(2) Develop a computer based file containing data on environmental education resource facilities including parks, zoos, museums, and centers. The file shall also contain data on managers of these facilities.

(3) Compile information for a handbook containing a list of the contacts and resource facilities identified in B.(1) and (2) above. The handbook shall also include appropriate information on each contact and facility.

(4) Establish an Environmental Education Information Secton with the PDE Resource Center. The Section shall collect and maintain environmental education materials including books, pamphlets, audiovisual presentations, research documents, and model environmental education programs. The Center shall utilize its existing systems and the Environmental Education Network established under task C. (1) to ensure dissemination and exchange of this information.

(5) Establish a "speakers bureau" by developing, publishing, and disseminating lists of speakers qualified to make presentations on environmental topics.

(6) Using the data compiled for tasks B.(1) through B.(5), develop and maintain a computerized environmental education data base. The data base may be enhanced by PDE by subscribing to appropriate outside data base systems.

C. Networking

(1) Establish an Environmental Education communications network linking the schools, organizations and individuals identified in tasks B.(1) and (2). The network shall include telecommunications connections with the DER Office of Administration, DER Environmental Education Centers, and other appropriate organizations.

(2) Conduct a statistically valid and reliable survey of the schools, organizations, and individuals identified in tasks B.(1) and (2). The survey shall determine specific areas of interest and concern for environmental education among such schools, organizations and individuals within Pennsylvania.

(3) Conduct a minimum of six regional meetings (one in each PDE planning region) for the schools, organizations and individuals identified in tasks B.(1) and (2). The meetings shall provide an opportunity to meet people who are involved in environmental education and to determine their interests and concerns.

(4) Establish an Environmental Education Advisory Council and hold scheduled meetings beginning in the third quarter of fiscal year 1984/85.

(5) Encourage network participants to consider and implement the recommendations of the Pennsylvania Environmental Education Master Plan.

D. Consulting/Technical Assistance

(1) Assist with the integration of environmental education into existing school curricula, develop a scope and sequence for environmental studies in the school and shall coordinate implementation of such studies with 22 Pa. Code, Chapter 5.

(2) Provide leadership and technical assistance for schools and intermediate units developing environmental education planned courses and program criteria.

(3) Assist organizations in designing courses, workshops, audiovisual presentations, and publications on environmental education.

E. Training

(1) Develop a teacher in-service training program for environmental education.

(2) Conduct the in-service training program, task E.(1),at least once in each of the six PDE state planning regions for intermediate unit representatives. Also, conduct the training program at least once at the PDE Annual Curriculum Conference (a minimum of seven presentations during the contract).

(3) Develop and coordinate a system which will provide environmental education workshops, seminars, and conferences for organizations throughout the state.

(4) Develop or obtain audiovisual programs on water quality, acid rain, and solid/hazardous waste issues for presentation to schools and organizations throughout the state.

(5) Present, or arrange for the presentation of, the programs developed in task E. (4) to at least 15 organizations.

F. Information

(1) Develop a brochure on the Environmental Education Program.

(2) Distribute the handbook developed under task B.(3) to schools, network participants, and other interested parties.

(3) Respond to all requests for environmental education information using the resources of the Environmental Education Information Section or other appropriate sources.

G. Funding

Seek outside funding from corporations, foundations, endowments, and Federal or local governments to augment state funding for the purposes of the program described in this Agreement.

The goal of the funding element will be to match or exceed with outside funds 100 percent of the Commonwealth's contribution to the program.

5. In all activities listed in Section 4 of this Agreement, PDE shall work in cooperation with the DER Office of Administration.

6. General Provisions

A. PDE staff travel expenses shall be reimbursed at rates not higher than state travel expense rates.

B. PDE shall submit to DER an annual report documenting accomplishments in the seven program elements identified in this Agreement no later than the 15th day following the end of each quarter. The report will also identify needs, establish objectives for the coming year, and monitor progress toward implementation of the Pennsylvania Environmental Education Master Plan recommendations.

C. This Agreement may be amended or modified at any time upon the mutual written agreement of both parties.

D. This Agreement may be terminated by either party upon ninety days advance written notice to the other party.

E. This Agreement may not be assigned in whole or in part without prior written approval of the Secretary of DER.

F. Any agreements or contracts by PDE with other agencies affecting implementation of any of the terms of this Agreement shall receive prior approval by DER.

G. PDE may reallocate budget funds to different major budget categories (A-F in Appendix A) subject to prior written approval by DER.

H. By October 1, 1984 PDE will provide to DER a more detailed and final budget reflecting anticipated actual personnel and program expenditures, which budget shall be subject to written approval by DER.

I. PDE shall provide to DER a detailed management plan for each of the work activities identified in this Agreement no later than December 30, 1984. The plan should include, but not be limited to, tasks and target dates for each of the Agreement activities.

On behalf of the parties hereto, this Agreement is entered into by and for:

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Resources

Secretary — Date 8/3/84

Deputy Secretary — Date 8/13/84
Office of Administration
Department of Environmental Resources

APPROVED AS TO FORM AND LEGALITY:

Office of Legal Counsel — Date
Department of Environmental Resources

I hereby certify that funds in the amount of $75,000 are available under Appropriation Symbol 01-35-81-84-1-200-20001-310

8.4123

Comptroller — Date 9/5/84
Department of Environmental Resources

Secretary of Budget — Date 9/5/84

COMMONWEALTH OF PENNSYLVANIA
Department of Education

Secretary — Date 8/9/84

Commissioner — Date 8/10/84
Office of Basic Education
Department of Education

Office of Legal Counsel — Date 8/10/84
Department of Education

APPROVED AS TO FORM AND LEGALITY:

OFFICE OF ATTORNEY GENERAL

Comptroller — Date 8/10/84
Department of Education

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APPENDIX A
Environmental Education Budget
Fiscal Year 1984-85

	DER	PDE	TOTAL
Personnel			
Director/47C (20 pay periods x 1170.75)	$23,415		
Curriculum Field Representative/43A (14 pay periods x 897.75)	12,569		
Clerk Steno/31D (18 pay periods x 609)	10,962		
Supervisor		4,000	
Staff Time (Specialists)		10,000	
Total Personnel	46,946	14,000	60,946
Fringe Benefits			
Director (23,415 x .4)	9,366		
Curriculum Field Representative (17,955 x .4)	5,028		
Clerk Steno (12,180 x .4)	4,385		
Total Fringe Benefits	18,779		18,779
Travel	1,000	1,000	2,000
Equipment	5,000	6,000	11,000
Supplies	275	300	575
Operational Expenses	3,000	5,000	8,000
GRAND TOTAL	$75,000	$26,300	$101,300

APPENDIX B

ENVIRONMENTAL EDUCATION DEFINITION

DEFINITION* (read down)	AMPLIFICATION
Environmental Education is a learning process	the process should be: continuous (lifelong) humanistic inquiry oriented interdisciplinary.
concerned with the interrelationships among components	a change in any component affects the other components.
of the natural	sun, air, water, land (mineral resources) plants and animals (including people)
and human-made world	the products of human intellect: governments, laws, economics, housing, services, industry, education, arts, recreation, transportation, mass communication and utilities.
producing growth in the individual	the growth process will: increase the commitment to active participation in society, clarify values, encourage harmonious lifestyles, increase knowledge, sharpen aesthetic appreciation, increase understanding, develop learning skills, encourage creativity.
and leading to responsible stewardship of the earth.	

**Definition adapted from the 1974 Environmental Education Advisory Council Report presented to Secretaries John Pittenger and Dr. Maurice Goddard.*